



HENRY COUNTY / PSA INFORMATION SERVICES DEPARTMENT STRATEGIC PLAN

FY -2014

April 9, 2013 by Christian Youngblood, Director of Information Services

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INTRODUCTION

Introduction

Never in the history of mankind has so much information been so readily available at the touch of a button. Mathematical formulas that once took hours to calculate are now computed in milliseconds. Documents that were once sent overnight via FedEx were rerouted to fax machines for expedience and those fax machines have now been rendered obsolete by email, which is nearly real-time. Rows of filing cabinets, bulging with documents, have been replaced by hard drives. Desktop computers have given way to smartphones, Microsoft has yielded to Google, and we have not even mentioned Social Media.

Based on the information above, one might assume that we have overcome the speed, storage, and competitive restraints of the past. That assumption would be wrong. While our processing power and storage capacity has grown exponentially over the past few years, so has our need/desire to collect and analyze more information. We now collect data that previously might have been considered useless and we find ways to relate it with other pieces of information. Many types of information that were previously retained for a short duration are now being archived for eternity. All of it will now be analyzed to aid in making better decisions.

Yesterday we were content with calculating statistics based on data that had been entered manually. The requirements placed on today's Technology Department demand that we find additional ways to gather data and provide both the computing power and knowledge to manipulate that same data for predicting future events. We are expected to provide all information to users, regardless of their physical location or the time of day, through a variety of interfaces (PC, website, or mobile phone).

The Technology Department still answers the most basic questions that come from our Users. We provide assistance whenever a desktop computer malfunctions and we stand ready to build a new server upon request. Telephones continue to be on every desk and must be supported the same as Internet, e-mail, and our ERP system (MUNIS). We continually find new ways to integrate the tools of yesterday with the dreams of today and the realizations of tomorrow.

In summary, it has never been a more exciting time to be in the Technology field.

Christian Youngblood
Director of Information Services
April 9, 2013

MISSION

Mission

The Information Services Department will provide effective and cost-conscious solutions, whenever possible, to resolve any request or problem encountered by any of our users, and we shall do such in a timely and courteous manner.

GOALS

Goals

THE FOLLOWING 4-GOALS WILL DEFINE THE INFORMATION SERVICES DEPARTMENT

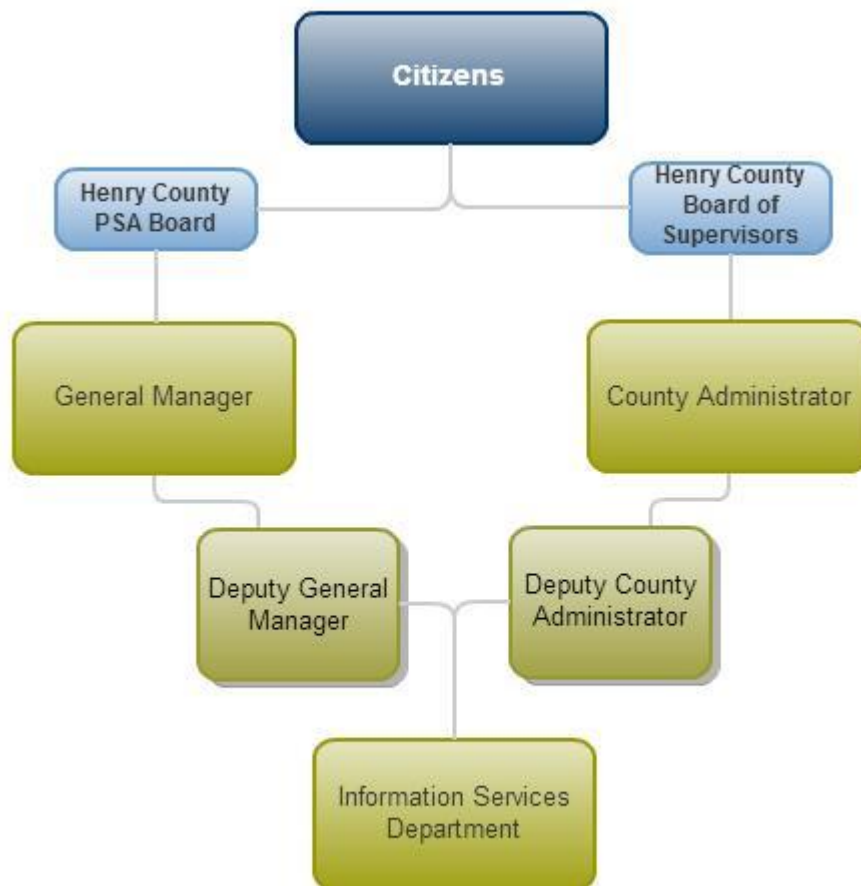
- When it comes to any Technology need, the Information Services Department will be the agency that our users **want to** call, not who they **have to** call. Our service will rival that of any outside agency and we will take pride in our reputation.
- Continuing education in Technology will be of paramount importance for the Information Services staff and will be extended to all Henry County & PSA personnel. We will strive to stay abreast of both current and emerging technologies while retaining the skills necessary to support our legacy systems.
- We will provide the employees of Henry County and Henry County PSA reliable equipment by creating and adhering to a responsible Capital Improvement Plan (CIP).
- We will always be cost-conscious of our expenses to ensure that our Citizens' money is used wisely. We will use internal staff when justified while being mindful of activities that are more cost effective to outsource. We will create and manage numerous vendor relationships to ensure competitive pricing for equipment and/or services that we must purchase.

ORGANIZATIONAL CHART

Organizational Chart

The Department of Information Services is funded by both Henry County and the Henry County Public Service Authority (PSA). The Team serves each organization, the Citizens of Henry County, and the Customers of the PSA. The members of the Information Services Team include the following:

Director, Christian Youngblood
MUNIS Coordinator, Steve Isom
Systems Analyst, Mark Alley
Senior Desktop Technician, Debra Anderson
Desktop Technician, Charlie Brown



SERVICES / TECHNOLOGIES SUPPORTED

Services / Technologies Supported

The Information Services Department supports many pieces of Technology that are common place for most organizations. Implementation and maintenance requires skilled project management and execution to ensure the reliability required by Henry County, PSA, 911, and other departments. Examples include:

- Desktop PCs
- Servers
- Network services (user authentication, file services, antivirus, etc.)
- PBX telephone system
- Email and websites
- MUNIS Enterprise Resource Planning (ERP) financial system

In addition to these “standard” items, the Team must support many more proprietary Technologies that require constant retraining and dedication of resources. Examples include:

- Mobile Data Terminals (MDTs) for Law Enforcement
- GIS mapping
- Parks and Rec reservation/management system
- Customer Self-Service portals for our Citizens
- Computer Aided Dispatching for e911
- Jail Management and Sheriff Management software
- Mobile devices, both County issued and personal
- Audio/Visual assistance
- Custom software (Jury maintenance, Law Accreditation, Incident Management, etc.)
- Document archiving

By the numbers, the Technology Department supports the following devices:

- 422 Workstations
- 28 Servers (9 physical, 19 virtual)
- 319 Users
- 282 Email Accounts
- 387 Telephones
- 50+ Mobile devices (smartphones)

ACCOMPLISHMENTS FY-2013

Accomplishments FY-2013

The job of a Technology Department is never complete. Upgrades and patches are released for existing applications regularly. New software is constantly being created that requires higher processing power and users always need more storage capacity. Following is a sampling of the many projects that were completed during the current year:

- E-911 hardware upgrade (All workstations, terminals, and servers)
- E-911 major software upgrade (Upgrade CAD, install new Mobile Data software for Sheriff)
- Installed and implemented Emergency Medical Dispatching (EMD)
- Began limited deployment of Windows 7 64-bit PCs
- Drastically expanded public Wi-Fi on separate vLAN
- Replaced the VCIN connection to Virginia State Police; Upgrade the network between City and County with secure VPN connectivity
- Installed a new system for inmate tracking in Jail
- MUNIS upgrade from 8.3 to version 9.4 (major revision)
- Increased network monitoring & logging capabilities
- Performed major upgrade of RecTrac (Parks & Rec reservation & management system)
- Hosted numerous training sessions, including website training & Windows 8 introduction
- Deployed AVG Anti-virus (major upgrade on all PCs)
- Implemented MUNIS Customer Self Service
- Installed an “always-on” broadband VPN connection to the PSA Shop
- Upgraded our County Internet access by relocating our DNS servers to a global provider
- Upgraded our virtual server infrastructure to VMware 5.0 (major upgrade)
- Designed and implemented new accreditation software for the Jail & Sheriff Departments
- Created and/or updated all documentation for Disaster Recovery policy
- Prepared 42 Desktops and 23 Laptops for the annual County Surplus Auction
- Installed 55 new County PCs, 8 PSA PCs, and 1 physical server

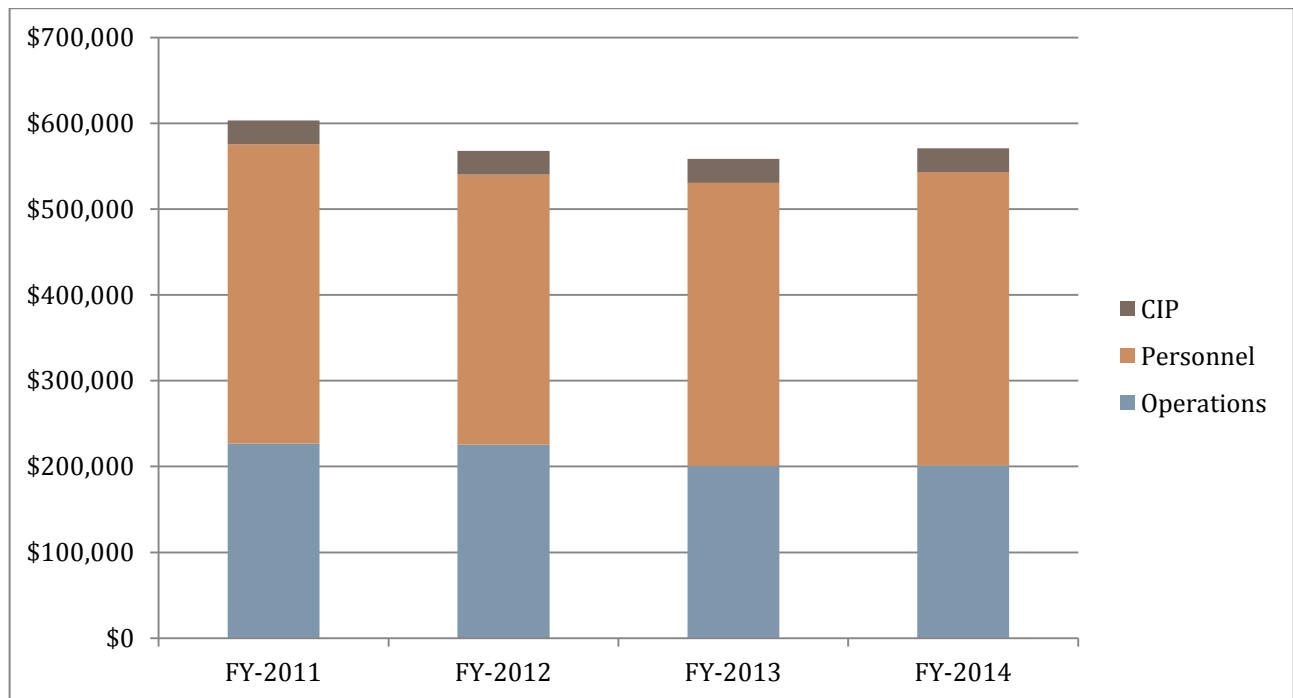
BUDGET HISTORY

Budget History

The Information Services Department has held both operational and personnel line items to nearly identical levels for four consecutive years. The overall budget for 2014 is 5-percent lower than 2011. Greater training in our Department has allowed us to reduce Professional Service expenses while better planning has resulted in lower maintenance costs on hardware related items.

Strategy: Continue automating processes, learning new technologies, and being vigilant with purchasing policies to maintain the current budget.

Combined County & PSA Budgets					
	FY-2011	FY-2012	FY-2013	FY-2014	4YR +/-
Operations	\$226,450	\$225,486	\$200,420	\$201,164	-11%
Personnel	\$349,056	\$314,677	\$330,334	\$341,976	-2%
CIP	\$27,700	\$27,700	\$27,700	\$27,700	0%
Total	\$603,206	\$567,863	\$558,454	\$570,840	-5%



HOW ARE WE DOING?

How Are We Doing?

The Technology Team sends out an annual survey to determine the level of service that we are providing, what our users like & dislike, and to solicit any suggestions on new technologies to implement. Following are the most recent results from the Customer Service portion of the survey.

Question 1: When you call upon the Information Service department, how long does it usually take to resolve your problem? (68-responses)

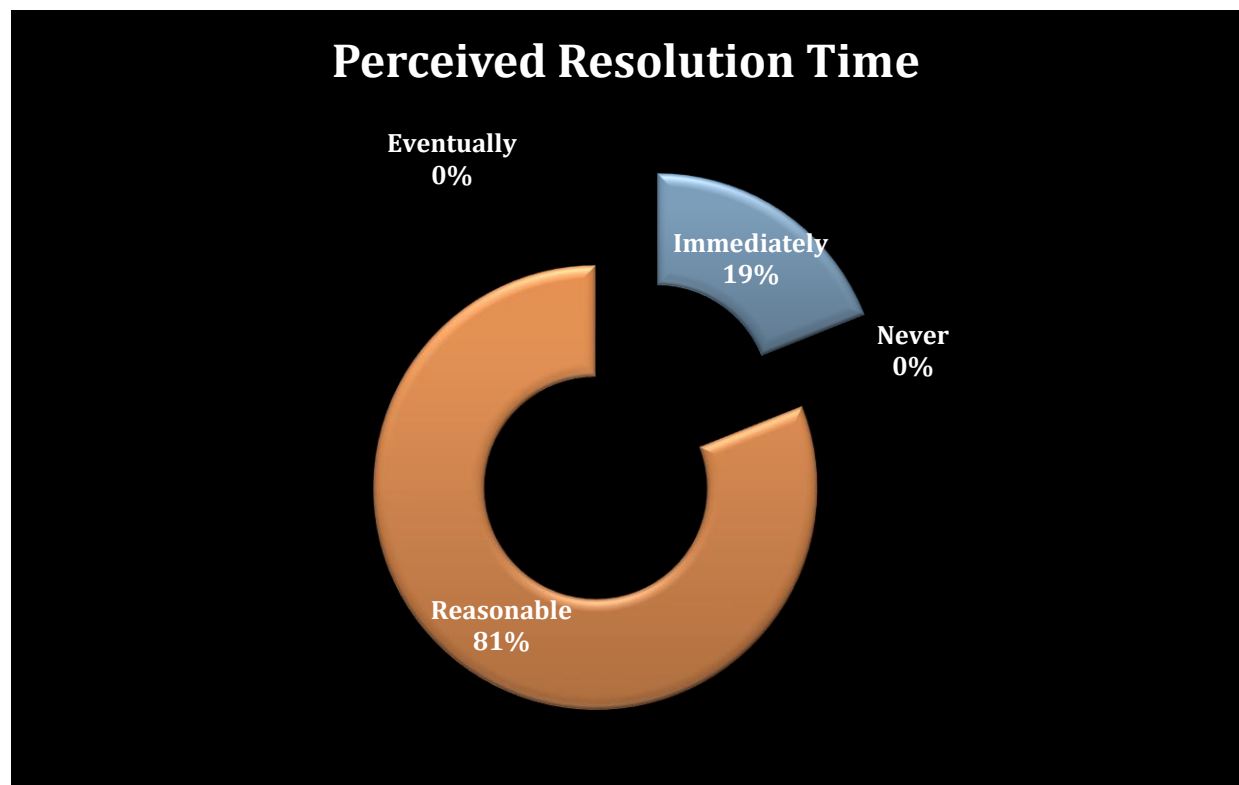
Choices:

Immediately (19-percent)

Within a reasonable time frame (81-percent)

Eventually (0-percent)

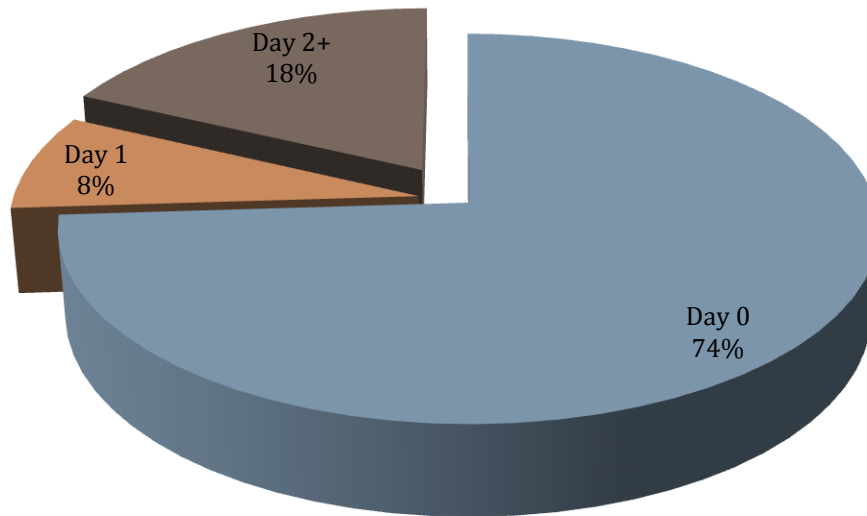
Never (0-percent)



HOW ARE WE DOING?

According to our Incident Management System (TeamManager), the Team resolved 2517 incidents during this time period, of which 74-percent were resolved the same day and 8-percent were resolved the next day. The average incident was resolved in 1.6 days (including weekends).

Days to Complete Requests



Recommended strategy to improve this area:

- Enable more self-service features, such as password resets, that allow users to immediately resolve problems that can be automated.
- Create a web-based submission process so that users may submit incidents 24x7.
- Increase use of smartphones so that Technicians can quickly respond to and update the status of incidents.

HOW ARE WE DOING?

Question 2: What is your overall opinion of the Information Services Department? (68-responses)

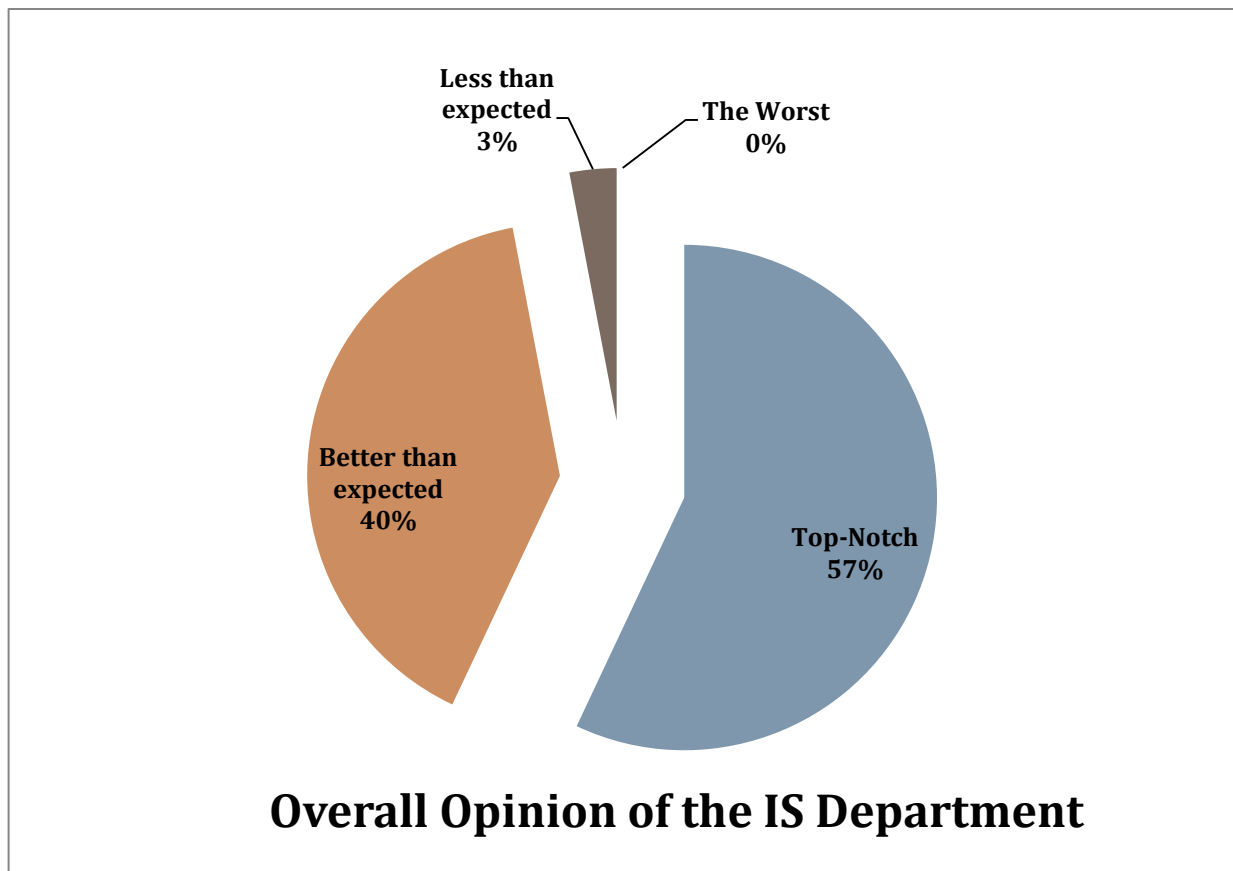
Choices:

Top-notch (57-percent)

Better than expected (40-percent)

Less than expected (3-percent)

The worst (0-percent)



Recommended strategy to improve this area:

- Improve continuing education for Team so that we are properly trained in the latest technologies.
- Make sure that we are adhering to best practices for Customer Service to ensure that our users understand our strong desire to assist them with all their technological needs.
- Review triage procedures to ensure that we are addressing the most important problems first.
- Ensure that all Incidents are logged so that we may identify trends and resolve issues proactively.

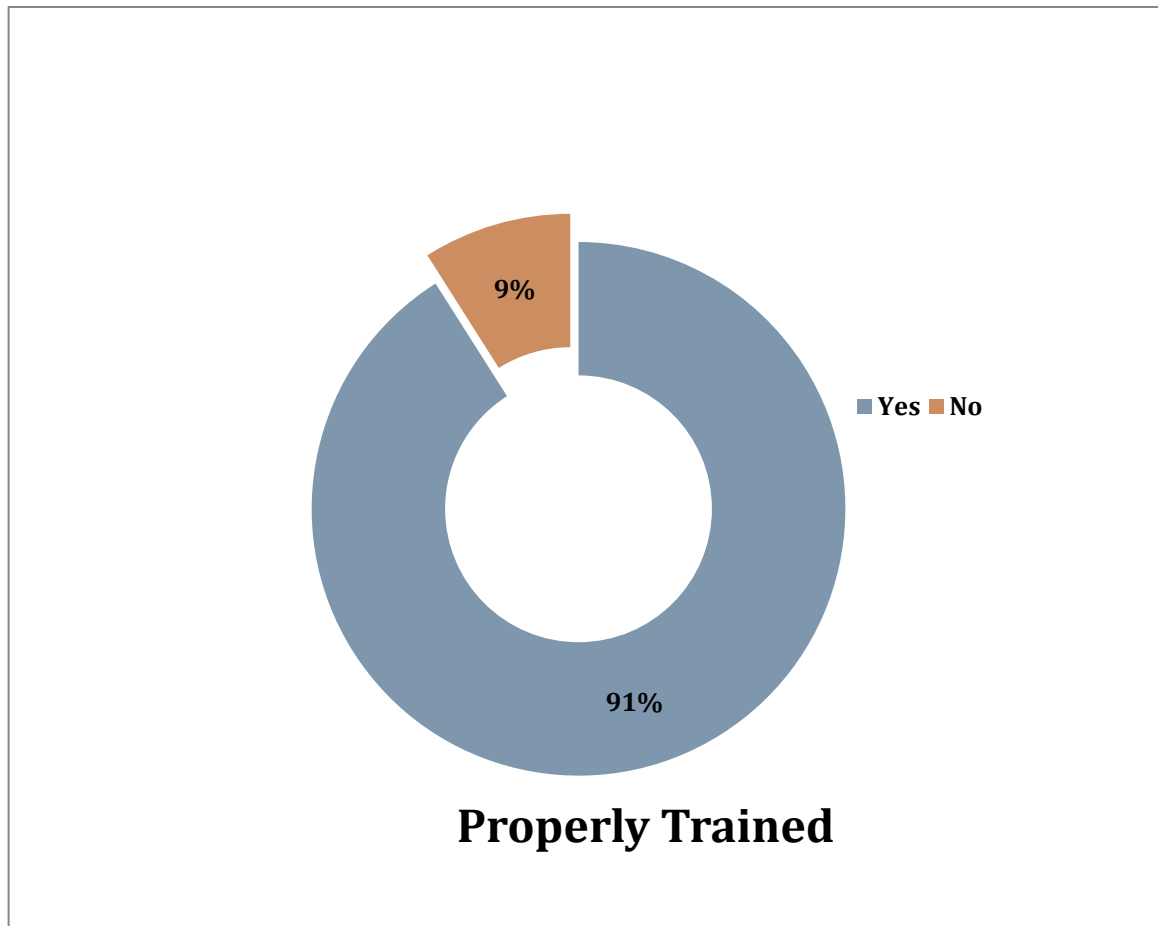
HOW ARE WE DOING?

Question 3: Do you feel properly trained to use your computer, software, and telephone? (68-responses)

Choices:

Yes (91-percent)

No (9-percent)



Recommended strategy to improve this area:

- Continue to offer public training for all users in topics that they have requested.
- Expand the monthly "Technology Tips" section in the County newsletter to address upcoming technologies in a proactive manner.
- Solicit requests from our Users to ensure that we provide the training that they most desire.

IDENTIFIED EMERGING TRENDS

Identified Emerging Trends

The Information Services Department has recognized the following technologies as imminent disruptors for our Users. We must make accommodations to integrate these new technologies into our organization to ensure that Employees and Citizens of Henry County / PSA are able to use the most relevant and current tools in conducting their business.

Remote access – Employees no longer work from 8:00am-5:00pm in the comfort of their office. Today's wireless, "always-on," world dictates that employees are accessible 24x7 from any location and have the ability to perform the same functions as if they were on-site.

Strategy: Tools for ensuring that this access is available already includes a secure VPN and web based e-mail. The Technology staff will review new methods of providing remote access to file & print services and telephony services to expand our capabilities.

Mobile access – Citizens and employees alike are now accessing the Internet from their mobile devices more often than from their desktop computers.

Strategy: Websites must now be designed to accommodate the smaller screens and touch-functionality of smartphones and tablets. Applications ("apps") must be designed to run on various mobile platforms, such as Android and iOS, and should take advantage of modern features, such as GPS. The Information Services Department will begin soliciting proposals to update these tools.

Social Media – Networking in the 21st Century gives each of us the capability to connect with larger audiences than ever before. Tools such as Facebook, Google+, and Twitter afford us the opportunity to disseminate information to select audiences at a moment's notice.

Strategy: Henry County will take advantage of these tools to reach more people, more quickly, when communicating announcements, emergency alerts, and more. We will be a model of Open Government with rapid dissemination of all important information. For continuity, our website re-design will include features to link our Social Media accounts.

Data Analytics / Big Data – In order to stay competitive with surrounding localities, Henry County will need the ability to gather and analyze data from numerous sources, including many which may never have been considered in the past.

Strategy: Being able to link seemingly dissimilar pieces of information and turning them into useful reports for analysis will be vital in making good choices. Henry County will develop data "maps" to find data that can be analyzed. We will begin the collection of data as soon as possible and begin training in-house staff to analyze the data for patterns.

Cloud computing – Economies of scale and an interconnected world have brought forth the question of how much local infrastructure makes sense for an organization to own and maintain. Cloud providers, such as Amazon and Google, offer hosting services at a fraction of what it costs to build and host your own services. These providers have the ability to scale up at a moment's notice with little extra expense to the customer. Many software providers are now offering to host their

IDENTIFIED EMERGING TRENDS

products on their own servers to reduce expenses such as server purchases and the labor required to perform routine operations, such as backups.

Strategy: The Henry County Technology department will need to secure a reliable and redundant Internet infrastructure in order to progress with cloud computing. The County ERP (MUNIS) is currently hosted by a third-party provider and it has been an unsatisfactory situation due to reliability of our connection, the Vendor's service, and various components of the Internet.

"Green" Initiatives – Electricity is required to power all computers, be it a server or desktop. More devices require more electricity.

Strategy: Henry County will act responsibly to reduce the amount of energy required to operate our devices. Initiatives, such as automatic sleep functions, and purchasing higher efficiency power supplies will reduce our environmental impact. Education will also be performed so that our Users will better understand the impact of powering equipment that is unused.

CHALLENGES / NEEDS

Challenges / Needs

Despite the vigilant work of the Information Services Team, we still have a number of challenges and needs that must be addressed in order to continue providing top-quality service. Some of these items will require additional capital funding, while others will simply require additional training of the Technology Department and/or Users. Not all challenges are easily recognizable and, as such, the Technology Team constantly seeks out problems in an effort to be proactive.

Subnetting our flat network – The Henry County network is currently configured in a “flat” configuration, resulting in substantial chatter amongst our more than 500-endpoints (desktops, laptops, servers, network printers, WAPs, etc.).

Strategy: We will segment our network to ensure both performance and reliability as our need for reliable data transport will continue to grow. Segmentation will be required to begin using VoIP technologies. Our in-house networking personnel is preparing a plan to begin this project.

Aging desktops – Computers now last much longer than they did a decade ago. The joke used to be that you could buy a new computer and it would be out of date before you got it home. This was somewhat true around the turn of the Century. Since about 2005, hardware performance has drastically outpaced software requirements and older computers are able to function much like newer models. Older computers are slower to respond than newer computers and become less reliable due to equipment failure. Approximately 50% of Henry County’s PCs are more than 5-years old.

Strategy: The CIP is not providing new computers fast enough to replace our oldest models. One of the reasons is that the Technology Department has been told to NOT budget for the Sheriff’s Department. Unfortunately, they are not budgeting money either. Grants have paid for replacement systems in the past but should not be relied upon for future replacements. All Departments must be included in a capital plan.

Core Switch – The brain of the Henry County network is a Cisco 4507R Core Switch, purchased in September 2006. None of our servers, PCs, or printers would be able to talk to each other without this device. It is essential for us to connect to MUNIS and the Internet. Our 911 Center is unable to access their servers without this critical device.

Strategy: This switch had been budgeted to be replaced in FY-2014 due to end of life support by the manufacturer. However, Cisco has extended support until December 2014, so the CIP has been adjusted to delay the replacement until July 2014.

Aging MDTs – Sheriff Deputies use ruggedized laptops as “Mobile Data Terminals” (MDTs) in their cars to improve their efficiency while on the road. The MDT allows a Deputy to perform license and license plate checks while making a traffic stop. They are able to see real-time information from the 911 Communications / Dispatch center, automatically report their location, query wanted profiles from the Jail & Sheriff databases, and so much more. Henry County has some of the most updated software available to connect the Sheriff, 911, and Jail staff. Laptops do not tend to last as long as

CHALLENGES / NEEDS

desktops and are much more costly to service. The majority of the MDT's is now more than 5-years old and is out of warranty.

Strategy: Funds to replace MDT's come out of the Sheriff's Budget and the FY-2014 shows no funding. This needs to be addressed immediately.

Reliable, redundant Internet connection – The Internet connection to the County / PSA is a direct fiber optic cable to MiNet. This connection has been in place for a number of years and has had very few sustained outages. However, many services are now provided through the cloud (i.e. MUNIS) and require 100 percent reliability. Outages of less than 1-second can wreak havoc on our users and MiNet has been unable to provide service at this necessary level.

Strategy: The Technology Department is working with MiNet to determine if they are able to resolve this problem. Additionally, contract information has already been provided from a competing ISP and is being considered as a replacement or additional Internet source.

VoIP / Aging PBX – Henry County operates our own PBX to support our 387 telephones and faxes. This PBX has had numerous software upgrades and is currently running the latest software and no end of life date has been announced. However, this is old technology that is rapidly being replaced by Voice over Internet Protocol (VoIP). VoIP is a much more cost effective and powerful method of managing telephones but requires a costly investment in the telephones and a local network that is configured to support the extra bandwidth.

Strategy: Henry County needs to optimize the County network prior to exploring this technology. Our Systems Analyst / Network Engineer was recently trained and certified to begin this type of work and is preparing a plan to move forward. We will implement a small number of handsets, and begin budgeting for a costly upgrade (~ \$200,000) over the next several years.

Licensing – While the price of desktop PCs continues to decline, the price of software keeps rising. Henry County currently purchases a Microsoft Operating System (Windows) and a Microsoft productivity suite (Office) with each computer. The cost of these two-items represents approximately forty-percent of the total PC cost. Moreover, the software must be repurchased to take advantage of any upgrades.

Strategy: The Technology Department will investigate software assurance terms through Microsoft that allow upgrades for no additional charge. However, we will not act immediately as we are waiting to see how cloud computing and new competitors might affect Microsoft's terms.

LIMITATIONS

Limitations

No on-site expertise for programming & data collection – This skill is becoming increasingly important to create feature-rich websites and mobile apps. Programming is much more complex than many skills in Technology and cannot readily be assigned to most people. It requires unique talents and is typically a specialty area.

Strategy: Henry County should partner with various higher learning institutes to find Interns that can assist with this area.

Aging staff / Retirement – Sixty-percent of the Information Services Team is rapidly approaching retirement age and many of their skills are at risk of being lost once they leave.

Strategy: We have instituted a policy of cross training and job diversification to minimize the risk that any one person be the sole expert in any particular area. We have also instituted mandatory training sessions to ensure that all Staff continues developing new skills required to perform their job.

Disjointed agencies such as the County, City, Schools, Social Services, Economic Development, Library, etc. have no sense of cooperation. Each organization has its own Technology personnel and maintains their own budget. Some have their own data centers, servers, phone switches and more. There is substantial duplication of efforts that could be consolidated for large cost savings.

Strategy: The Technology Department will continue to investigate & encourage partnerships to incur savings. We will recommend these findings to the appropriate Boards with the understanding that they must make the ultimate decisions.

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